

GeneSat-1 Day 14 Mission Operations Summary: T = Launch + 13 days, 21 hours

C. Kitts, 12/30/06

Two contacts were executed today at ~ 2245 and 0025 PST. During these contacts, the ops team ran standard state of health procedures, and then used their remaining time to gather low-resolution post-experiment payload health data over the past week as well as high-resolution bus data for the most recent orbit.

Satellite health remains nominal. Payload temperature is holding steady at its set point of 25 degrees C, with sensor values in the 23.04 to 25.98 deg C range. Payload pressure is 14.466, and humidity is 91.545%. Bus power is nominal, there have been no CPU resets, and temperatures are as expected (the external payload enclosure temp is ~ 18 deg C, and solar panel temps early in eclipse are ~ 15 to 16 deg C).

Ground segment remains functional and nominal with the exception of the SRI antenna mesh damage caused by the severe windstorms on 12/26-27/06. As expected, this damage has significantly lowered the command channel success rate to ~ 34%, which compares to ~ 55% from a week ago. The ops team also believes that a poor set of TLEs contributed to the poor command performance of the first contact; by listening to the audible beacon signal, the orbit estimate seemed to be significantly “ahead of” the actual satellite position. Coincidentally, NORAD issued a new set of TLE’s in time for the second contact, and performance improved considerably.

The ops team continues to practice telephone protocols with distributed team members in preparation for a smooth transition of the control node to non-SRI locations. The dashboard website has received 42,000+ hits.

Day 14 Mission Operations Team: Mike Rasay – command channel operator, Phelps Williams– beacon channel operator, Chris Kitts –telemetry analyst, Paul Mahacek – dish tracking.